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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,311	01/15/2002	Richard A. Weekley	36032.096	5157

36122 7590 07/11/2003

DUFT SETTER OLLILA & BORNSSEN LLC
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BOULDER, CO 80302

EXAMINER

WALLING, MEAGAN S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,311

Applicant(s)

WEEKLEY ET AL.

Examiner

Meagan S Walling

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 21, 30, 41 and 50 is/are rejected.
- 7) ☒ Claim(s) 2-9, 11-20, 22-29, 31-40, 42-49 and 51-60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 10, 21, 30, 41, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (US 6,003,029) in view of Kelly, III et al. (US 6,272,477).

Regarding claims 1, 10, 21, 30, 41, and 50 Agrawal et al. teaches processing subspaces in a multi-dimensional data space to identify clusters and processing the clusters to classify a feature (column 5, lines 12-16).

Regarding claims 41 and 50, Agrawal et al. teaches a storage system that stores the application software (column 6, lines 41-43).

Agrawal et al. does not teach processing the time series data with a membership function to generate a hypersurface.

Kelly, III et al. teaches using a membership function to create a hypertrapezoid (column 3, lines 41-42).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Agrawal et al. with the teachings of Kelly, III et al. to identify clusters in hypersurfaces. Instead of merely processing a subspace in two dimensions, processing a hypersurface would allow clusters to be found in an n-dimensional space, allowing the space to be extended (Kelly, III et al., column 3, lines 32-40).

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Allowable Subject Matter

Claims 2-9, 11-20, 22-29, 31-40, 42-49, and 51-60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record, whether taken singularly or in combination, teaches the claimed invention.

Claims 2, 11, 22, 31, 42, and 51 require contouring the hypersurface to form the cluster.

Claims 3, 12, 23, 32, 43, and 52 require classifying the cluster based on a cluster type.

Claims 6, 16, 21, 36, 46, and 56 require calculating feature membership values for the time series data based on the classified feature.

Claims 8, 18, 28, 38, 48, and 58 require that the hypersurface have a height scale from zero to one.

Claims 9, 19, 29, 39, 49, and 59 require that the hypersurface indicate confidence values for the time series data.

Claims 20, 40, and 60 require processing one of the hypersurfaces to identify additional ones of the clusters.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meagan S Walling whose telephone number is (703) 308-3084.


The examiner can normally be reached on Monday through Friday 8:30 AM to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

msw
June 27, 2003



John Barlow
Supervisory Patent Examiner
Technology Center 2800